The Effect of Graphic Organizers Strategy on Reading Comprehension of Students with Difference Learning Styles.

Mihdar Amar
University of Islam Malang
Email address: mihdaramar77@gmail.com

Abstract

This investigation of the effect of Graphic Organizers strategy conducted on students with different learning styles of reading comprehension. This research to examine whether there is a significant difference in the reading comprehension between the students taught by KWL and Mind Mapping. Whether there is any significant difference in reading comprehension among the visual and auditory. Whether there is any significant difference in reading comprehension among the students' learning styles use a graphic organizer. Whether there is an interaction between the KWL and Mind Mapping and students' learning styles in reading comprehension. The population was the students of the second grade of SMK 02 Muhammadiyah Malang in academic 2018/2019 consist of 22 students. The instruments of this research consist of two instruments. They were questionnaire and testing for getting the data of students' reading comprehension. The result of computation independent t-test showed that the mean score of the experimental group A was 67.77 and experimental group B was 59 it meant that H0 was rejected. The finding also indicated that the difference between reading comprehension among visual and auditory was significant. The finding also indicated that visual group taught using Mind Mapping had a better score that visual group taught using KWL. The finding discloses too that there was no interaction between graphic organizers and learning style. It meant that graphic organizers did not have something to do with learning style.

Keywords: graphic organizers, mind mapping, kwl, reading comprehension, and learning styles.

Learning a foreign language involves acquiring four types of skills: listening, speaking, reading and writing. Jahangard (2011) stated that reading was the most important of all. Reading is recognized in university for students who have a low-level degree or high degree (Noor,2006) Reading is a process to understand the information which source at the WH question, share the meaning and strategies, check their interpretation and use social context to focus their response (Walker, 2000). Reading comprehension is not a single step or easily acquired skill. Reading is

recognized in university for students who have a low-level degree or high degree (Noor,2006) Reading is a process to understand the information which source at the WH question, share the meaning and strategies,

Global reading strategies is a strategy which applied by students who have a complication in reading activity, sometimes the problem will lose by itself by using a media or strategies. The other name of problem solving in reading is suggestive. As a student, reading strategies are the most important cases in the study. Especially, the reader talked aboutthe problem while the text becomes difficult to understand and answer the main idea from the text and found out the point each paragraph. The most favorite one method in reading is Graphic organizer. It could help students to solve the problem in reading comprehension test and also for the teacher get easy for teaching in the classroom. The Graphic Organizer is a famous strategy for students and teacher in the teaching process. For helping the students in learning, sometimes the teacher needs some strategy for solving this problem. The Graphic organizer is the first choice will be appeared because this method has many types in teaching reading. They are diagrams, picture, and Mind Mapping. These strategies could help students do the task in their classroom (Jitendra&Gajria, 2008)

Cox and Mcknight (2010) recommended for students and teacher that applied Graphic organizer could be more quickly to recognize the point implied at the text and also make it easier to determine the content of the text without reading it over and over again, only needed an appropriate analysis. According to Russel and Fealy (2010) stated that in reading a text, prioritizing intelligence and foresight in reading some of the reading texts. To understand and comprehend a text firstly will help the students improve and get a good score in their reading process and also motivated them. A Lot of research shows that this graphic organizer is very useful for beginner and also a student who those study reading text. Merkley and Jefferies (2010) concluded that there were many mistakes happened in using this method, systematic even instruction error. This error greatly influences students' learning process, especially for the beginner ones. In fact, this method was accomplished to easy for understanding a reading test.

In addition, studies about how to use a reading strategy of Graphic Organizer became a reading tool in EFL context are still scarce (Jiang and Grabe, 2007, Cochrane, 2010, Jessica, 2010). Varying the strategy and model by giving interest for the aspect of learning style who students have visual and auditory preference may be a solution. Brown (2007:360) stressed the coordinated applying more than one even many of strategies while students are reading. The materials were perhaps too difficult for most of the students' level and not helpful for the students' attainment competence. The choice of material must reflect students' background knowledge. Conversely, George (2008) revealed contrast result, the study investigated the influenced on the method namely Graphic Organizer which improve students' reading in the learning process with an online media to know the something based their environment in United States History. Therefore, the yield from the research finding suspicioned that Graphic Organizer did not succeed in increasing the

knowledge of student via online learning process to recognize the environment of study. Perhaps, there were some errors in the instruction and learning process in the United States.

In brief, pursuant to preliminary study above, graphic organizer strategies have been conducted in several countries. However, the research is mostly done of some grades at college, junior high school, and elementary school. In Indonesia itself, research of the Graphic Organizer strategies is inconclusive, even never done in vocational high school level. Henceforward, there are gaps between what was observed and what was attracted to observe. Some researches indicated that graphic organizer strategies impact the ability of reading of students but some did not. It contradicts theoretically and required to verify. Some researchers concluded that the other factor influenced other variable but some did not, even in Indonesia factorial design almost never conducted.

Based on the background of the study, the study was different from the other previous research. The researcher would like to figure out other combined effects of the strategies of Graphic Organizer (KWL and Mind Mapping) and the variant of students' learning styles on reading comprehension. Therefore, this research entitles "The Effect of Graphic Organizers Strategy on Reading Comprehension of Students with Different Learning Styles."

Methods

This research was quantitative research. The design of this research was a quasi-experimental design. This method was chosen because the researcher wanted to appeal the two methods, namely graphic organizer strategy KWL and Mind Mapping strategy in the learning process of reading comprehension along variant of learning styles. This research used a quasi-experimental research design because the researcher was impossible to randomize the students because it could disturb the teachers' time. The result will compare with the experimental group A and experimental group B which are treated alongside by Graphic Organizer strategy. Yet, the group was also divided into auditory and visual learning style. The target of this treatment of the research was the students of SMK 02 Muhammadiyah Malang.

In this research, the variables consist of the dependent and independent variable. The dependent variable was students reading comprehension achievement. Accounted for are two kinds of independent variables namely the handle by KWL and Mind Mapping as an active independent variable and also students' learning styles as attribute independent variable. An active independent variable or the treated by KWL and Mind Mapping (Graphic Organizers) was one of particular the researcher can manipulate directly. On other hands, an attribute independent variable or auditory and visual was one such the researcher could not actively manipulate. The researcher used a factorial design to extend the number of relationships that may be examined. Available instruments in this research consist of two tools, they were testing for and questionnaire.

The reading comprehension test as the first instrument was in the form of test of the objective which was used as pre-test and post-test in this research. The tests of reading comprehension test are used to gain the data onto students learning styles questionnaire as the second instrument which was formed to catch the data of students' learning styles.

Result

The endof the calculationof the post-test for group A and group B are summarized at the following table 4.1.

Table 4.1 The analysis to post-test of the group KWL (A) and group Mind Mapping (B).

	Experiment Group A (Mind Mapping)	**Experiment Group B (KWL)**
Number of students	11	11
Highest score	88	92
Lowest score	60	48
Mean score	72.73	65.45
Standard deviation	9.435	14.781

Table 4.1 shows that among the 11 students of KWL group and Mind Mapping group for 11 students, the lofty score of the post-test of the KWL students was 88 and Mind Mapping was 92, the inaudible score of post-test of the KWL class was 60 and the Mind Mapping class was 48. It showed the separation in terms of the lofty score and the inaudible score between the KWL and Mind Mapping class.

The statistics in Table 4.1 indicates the enduring score of the post-test of the Mind Mapping was 72.73 and KWL class was 65.45. It showed the descent of the post-test scores in terms of the mean score compare between the KWL and Mind Mapping. The standard deviation of the post-test of the KWL was 9.435 and the Mind Mapping was 14.781. It meant that these two colonize of scores have the data value cluster were close around the mean. Mind Mapping was better than KWL in reading comprehension.

Besides, based on the students' learning style questionnaire, there were 12 students who have a visual learning style and 10 students who have an auditory learning style. Based on the calculation analysis, the mean number of points received in the group for the auditory group was 74.00 and the mean number of points received in the group visual was 80.80. It meant that the visual group was better than the visual group.

The Descriptive Statistic of Two Way ANOVA

The data of reading comprehension of KWL and Mind Mapping obtained from post-test were presented here.

Table 4.2 The Combined Effect of Strategy and Learning Style.

Learning Styles	Teaching strategies	Mean	Std. Deviation	N
Visual	KWL	79.60	16.273	5
	Mind Mapping	80.80	14.255	5
	Total	80.20	14.436	10
Auditory	KWL	56.00	7.589	6
	Mind Mapping	74.00	14.913	6
	Total	65.00	14.685	12
Total	KWL	66.73	16.930	11
	Mind Mapping	77.09	14.321	11
	Total	71.91	16.195	22

From the table, the mean, standard deviation, and the sample size for each group (Experimental group A and B). The mean number of points received in the group for Mind Mapping with auditory was 74.00 and the mean number of points received in the group Mind Mapping with visual was 80.80. The total mean of the experimental group (taught using Mind Mapping) was 77.09 The mean number of points received in the group for KWL strategy with auditory was 56.00 and the mean number of points received in the group for KWL strategy with visual was 79.60. The total mean of the experimental group (taught using KWL) was 66.73. The visual group taught using Mind Mapping strategy had better score compared with the auditory group using Mind Mapping. Besides, the visual group taught using KWL strategy had better than score compared with the auditory group using the KWL strategy. It could be concluded that the good score achieves by the two groups was not only influenced by the strategy, that was a graphic organizer but also the different learning styles.

Table 4.3 The Summary of the Result of Interaction the Two Way ANOVA

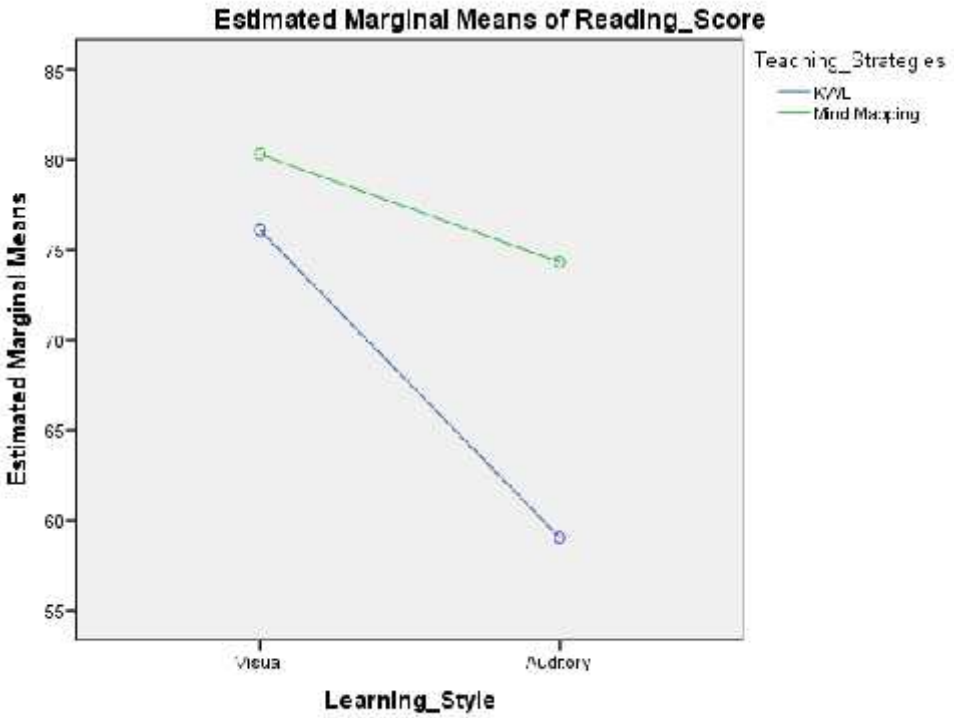
Tests of Between-Subjects Effects

Dependent Variable: Reading Score

Source	Type III Sum of Squweres	Df	Mean Squwere	F	Sig.
Corrected Model	2600.083[a]	4	650.021	3.800	.022
Intercept	2565.477	1	2565.477	14.999	.001
Pretest	364.264	1	364.264	2.130	.163
Learning Style	601.702	1	601.702	3.518	.004
Teaching Strategies	516.926	1	516.926	3.022	.100
Learning Style * Teaching Strategies	148.955	1	148.955	.871	.364
Error	2907.736	17	171.043		
Total	119268.000	22			
Corrected Total	5507.818	21			

a. R Squwered = .472 (Adjusted R Squwered = .348)

The result of the analysis of the interaction between Mind Mapping, KWL, and students' learning styles showed that the F interaction (Group Learning Style) was .679 with a p-value (sig.) is .475. It is greater than the significance level used in this research (sig.475>.05) it could be concluded that the result of the analysis was accepted the null hypothesis (H04) and rejected the alternative hypothesis (HI4). It meant that there was no interaction between students taught using Mind Mapping and KWL strategy and students' learning styles in reading comprehension. The detail computation of the statistical computation the interaction between methods and learning styles by means Two Way ANOVA is explained in Figure 4.3 below



Discussion

Research finding in this research support the earlier studies theories about graphic organizers strategy state by Regarding Russell and Fealy (2010), Ciascai (2009), McKnight (2010) and Willis (2008), and William (2005) that graphic organizers was an effective strategy in helping students to understand the important point of the reading text. However, there were differences between this research and previous research. They were the text used, the instrument used and the attribute variable used (learning style).

On the contrary, eliminating the consideration of the use of a graphic organizer of visual learners got better than auditory learners. The mean score of visual group 78.192 and auditory learner were 66.673 with a P-value (sig.) .078

which was lower than .05. It means that students' learning styles give a different impact on reading achievement. Furthermore, by eliminating the consideration of students' learning styles, Mind Mapping got a better score than the KWL group was 77.09. P value (sig.) .078 which is lower than .05. it means that Mind Mapping strategy increases students' reading comprehension if compared with KWL strategy. The result of this research showed that there were different scores between two groups, but there is no interaction between the Mind Mapping or KWL strategy and students' learning style on reading comprehension with the P value (sig.) .364 which was higher than .05. The finding of this research revealed that the graphic organizer (KWL and Mind Mapping) does not have anything to do with learning styles.

The improvement in the post-test score of the experimental group B was affected by several reasons. Firstly, the implementation of Mind Mapping strategy helped students have comprehensible input general language competence from reading the material. Secondly, Mind Mapping help students grow their vocabularies by finding new words in the text. Third, by Mind Mapping and KWL activity, the students developed their language and literacy skills that were useful for comprehending the text appropriately. The implementation of Mind Mapping strategy prevented students' boredom as they never felt before because the students did the interesting activity. Therefore, Mind Mapping was more effective than the KWL strategy in improving students' reading comprehension achievement.

This research was found out that Mind Mapping better than KWL strategy. This case was useful for the teacher to improve the teaching and learning process in the classroom. Furthermore, the practically, this research could bridge the student to encourage them to improve their reading comprehension by using graphic organizer strategies, such as: understanding the meaning of short simple essay the form of a recount and narrative text.

Conclusion and Suggestion

Based on the result of the analysis and discussion, this research attempted to answer problem presented in Chapter I. From the research problem and statistical computation in data analysis, there were four conclusions as follows. First, both Graphic Organizer strategies had the significant different in reading comprehension. However, Mind Mapping strategy was effective than KWL strategy. In accordance with research question 2, the finding also indicated that the difference between reading comprehension among visual and auditory learning style was significant. The finding proved that that visual learning style was benefitted in this research with better score in post-test. Concerning research question 3, the finding in also indicated that visual group taught using Mind Mapping had better score that visual group taught using KWL. It could be concluded that the mean score achieved by the two groups was influenced by strategy and learning style. With regard to research question 4, the finding discloses that there was no interaction between graphic organizers strategy and learning style. It meant that graphic organizers strategy KWL and Mind Mapping did not have something to do with learning style. The good mean

score achieved can be caused by graphic organizers KWL or Mind Mapping strategy and learning style separately.

For other researchers, especially for those who mean to conduct further research in the relation with research' finding. Hopefully, that further experimental studies dealing with graphic organizer KWL and Mind Mapping strategy could be conducted in different subjects of study and different learning styles. Therefore, the investigation of the effectiveness of the graphic organizer KWL and Mind Mapping strategy in different area language skill and different level of studies and also the other kinds of Graphic Organizer were still needed to be carried out.

Based on the result of the analysis and discussion, this research attempted to answer the problem presented in Chapter I. From the research problem and statistical computation in data analysis, there were four conclusions as follows. First, both Graphic Organizer strategies had a significant different in reading comprehension. However, Mind Mapping strategy was effective than KWL strategy. In accordance with research question 2, the finding also indicated that the difference between reading comprehension among visual and auditory learning style was significant. The finding proved that that visual learning style was benefitted in this research with a better score in post-test. Concerning research question 3, the finding in also indicated that visual group taught using Mind Mapping had a better score that visual group taught using KWL. It could be concluded that the mean score achieved by the two groups was influenced by strategy and learning style. With regard to research question 4, the finding discloses that there was no interaction between graphic organizers strategy and learning style. It meant that graphic organizers strategy KWL and Mind Mapping did not have something to do with learning style. The good mean score achieved can be caused by graphic organizers KWL or Mind Mapping strategy and learning style separately.

For other researchers, especially for those who mean to conduct further research in relation to research' finding. Hopefully, further experimental studies dealing with graphic organizer KWL and Mind Mapping strategy could be conducted in different subjects of study and different learning styles. Therefore, the investigation of the effectiveness of the graphic organizer KWL and Mind Mapping strategy in different area language skill and different level of studies and also the other kinds of Graphic Organizer were still needed to be carried out.

REFERENCES

Brown, H.D.(2007). *Teaching byy principles an Interactive Approach to language Pedagogy(*2nd ed.). San Francisco State University.

Fealy, E. M., (2010). *Explicit Instruction of Graphic Organizers as an Informational Text Reading Comprehension Strategy*: Third Grade Students Strategies and Perceptions.

Grabe, W. &Stoller, F. L. (2002). Teaching and Researching Reading. Britain: Pearson Education

Gajria, M., Jitendra, A., Sood, S., & Sacks, G. (2007). Improving comprehension of expository text in students with LD: A research synthesis. *Journal of Learning Disabilities*, 40, 210-225

Hall, R. H., Dansereau, D. E., & Skaggs, L. P. (2001). Knowledge maps and the presentation of related information domains. *Journal of Ex- perimental Education,* 61,5-18

Jiang, X.,&Grabe, W. 2007. Graphic organizers in reading instruction: Research findings and issues. Reading in a Foreign Language, 19(1), 34-55

Jitendra, A. K., Edwards, L., Choutka, C. M., &Treadway, P. (2002). *A collaborative approach to planning in the content areas for students with learning disabilities*: Access to the general curriculum. Learning Disabilities Research & Practice,17, 251–266.

McKnight, K. S. (2010). *The Teacher's Big Book of Graphic Organizers*. San Francisco: Jossey -Bass A Wiley Imprint

Walker, L. (2002). First language influences on second language word reading: All roads lead to Rome. Language Learning, 49 (3), 447-471.

Williams, J. P., Hall, K. M., Lauer, K. D., Stafford, K. B., DeSisto, L. A., &deCani, J.S. (2005). Expository text comprehension in the primary grade classroom. *Journal of Educational Psychology, 97, 538-550.*

Williams, J.P. (2005). Instruction in reading comprehension for primary grade students: A focus on text structure. *The Journal of Special Education, 39, 6-18.*